

**WHAT IS CLAIMED IS:**

1. A relay, comprising:
  - a) a first circuit;
  - b) a second circuit;
  - c) a ground;
  - 5 d) an electro-magnetic actuator assembly; and
  - e) an armature assembly which is movable between first and second positions with respect to the first and second circuits, wherein:
    - i) armature assembly movement is controlled by the electro-magnetic actuator assembly;
    - 10 ii) movement of the armature assembly to its first position allows current to flow through the first circuit; and
    - iii) movement of the armature assembly to its second position couples the first circuit to the ground and allows current to flow through the second circuit.
2. A relay as in claim 1, further comprising at least one biased conductor, wherein the at least one biased conductor is biased not to couple the first circuit to the ground, and wherein movement of the armature assembly to its second position causes the at least one biased conductor to couple the first circuit to the ground.  
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3. A relay as in claim 2, wherein:
  - a) the armature assembly comprises at least one actuator arm; and
  - b) the at least one actuator arm presses on the at least one biased conductor and causes the at least one biased conductor to couple the first circuit to the ground as the armature assembly moves to its second position.  
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4. A relay as in claim 2, wherein:
  - a) the at least one biased conductor is coupled to the ground; and
  - b) the at least one biased conductor is biased not to contact the first circuit.
5. A relay as in claim 4, wherein the at least one actuator arm presses on the at least one biased conductor and moves the at least one biased conductor into contact with the first circuit as the armature assembly moves to its second position.
6. A relay as in claim 2, wherein one or more of the at least one biased conductor comprises a leaf spring.
7. A relay as in claim 1, wherein the first circuit is a pass-through circuit.
8. A relay as in claim 7, wherein the first circuit comprises a stripline.
9. A relay as in claim 7, wherein the second circuit is an attenuator circuit.
10. A relay as in claim 1, wherein the electrical length of the first circuit is substantially matched to the electrical length of the second circuit.
11. A relay as in claim 1, wherein the armature assembly comprises an extension, wherein:
  - a) the extension is coupled to the ground; and
  - b) the extension contacts the first circuit only when the armature assembly is moved to its second position.

12. A relay as in claim 11, wherein:

- the extension is generally T-shaped; and
- opposite upper ends of the T-shaped extension contact opposite ends of the first circuit when the armature assembly is moved to its second position.

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13. A relay as in claim 1, further comprising a substrate on which the first and second circuits are mounted, wherein at least a portion of the ground presents on the substrate to form a dividing line between the first and second circuits.

14. A relay, comprising:

- a pass-through circuit;
- an attenuator circuit;
- means for alternately closing and allowing current flow through the pass-through and attenuator circuits; and
- means for grounding the pass-through circuit while the attenuator circuit is closed.

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15. A method for reducing signal noise in a relay comprising pass-through and attenuator circuits which are alternately closed by operation of an armature assembly of the relay, the method comprising:

- providing the armature assembly with a grounding portion; and
- orienting the grounding portion of the armature assembly to make contact with the pass-through circuit when the attenuator circuit is closed, but not when the pass-through circuit is closed.

16. A method as in claim 15, wherein orienting the grounding portion of the armature assembly to make contact with the pass-through circuit comprises orienting the grounding portion of the armature assembly to make contact with opposite ends of the pass-through circuit.

17. A method as in claim 15, wherein providing the armature assembly with a grounding portion comprises providing the armature assembly with a generally T-shaped grounding portion.

18. A method for reducing signal noise in a relay comprising pass-through and attenuator circuits which are alternately closed by operation of an armature assembly of the relay, the method comprising:

- providing the relay with at least one biased conductor, wherein the at least one biased conductor is biased not to couple the pass-through circuit to ground; and
- moving the armature assembly, wherein:
  - movement of the armature assembly to a first position applies pressure to the at least one biased conductor, thereby coupling the pass-through circuit to ground via the at least one biased conductor; and
  - movement of the armature assembly to a second position removes pressure from the at least one biased conductor, thereby breaking a connection between the pass-through circuit and ground.

19. A method as in claim 1, wherein the at least one biased conductor is only one biased conductor.